

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Shunpei Yamazaki et al.	Art Unit	: 2825
Serial No.	: 09/995,549	Examiner	: Granvill Lee
Filed	: November 27, 2001	Confirmation No.:	
Title	: SEMICONDUCTOR THIN FILM, SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF		

Commissioner for Patents
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RESPONSE TO ELECTION OF SPECIES REQUIREMENT MAILED
NOVEMBER 3, 2005 AND PRELIMINARY AMENDMENT

Prior to examination, please amend the application as indicated on the following pages.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 11 of this paper.

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously Presented) An SRAM comprising:
a substrate;
an insulating film formed on the substrate, said insulating film having a protrusion;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a word line electrically connected to the pair of access transistors,
wherein at least one of the cross-coupled driver transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed, and
wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region.

2. (Original) The SRAM according to claim 1 wherein said mono-domain region includes substantially no grain boundary.

3. (Original) The SRAM according to claim 1 wherein any grain boundary included in said mono-domain region is electrically inactive.

4. (Currently amended) An SRAM comprising:
a substrate;

an insulating film formed on the substrate, said insulating film having a protrusion;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a [[bit]] word line electrically connected to the pair of access transistors,
wherein at least one of the access transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed, and
wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region.

5. (Original) The SRAM according to claim 4 wherein said mono-domain region includes substantially no grain boundary.

6. (Original) The SRAM according to claim 4 wherein any grain boundary included in said mono-domain region is electrically inactive.

7. (Previously Presented) The SRAM comprising:
a substrate;
an insulating film formed on the substrate, said insulating film having a protrusion;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a word line electrically connected to the pair of access transistors,

wherein at least one of the cross-coupled driver transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed,

wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region, and

wherein a crystallization direction of said crystalline semiconductor film is substantially in parallel with a major surface of the substrate.

8. (Original) The SRAM according to claim 7 wherein said mono-domain region includes substantially no grain boundary.

9. (Original) The SRAM according to claim 7 wherein any grain boundary included in said mono-domain region is electrically inactive.

10. (Previously Presented) An SRAM comprising:
a substrate;
an insulating film formed on the substrate, said insulating film having a protrusion;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a word line electrically connected to the pair of access transistors,
wherein at least one of the access transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed,
wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region, and

wherein a crystallization direction of said crystalline semiconductor film is substantially in parallel with a major surface of the substrate.

11. (Original) The SRAM according to claim 10 wherein said mono-domain region includes substantially no grain boundary.

12. (Original) The SRAM according to claim 10 wherein any grain boundary included in said mono-domain region is electrically inactive.

13. (Previously Presented) An SRAM comprising:
a substrate;
an insulating film formed on the substrate, said insulating film having a protrusion extending in one direction;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a word line electrically connected to the pair of access transistors,
wherein at least one of the cross-coupled driver transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed, and
wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region.

14. (Original) The SRAM according to claim 13 wherein said mono-domain region includes substantially no grain boundary.

15. (Original) The SRAM according to claim 13 wherein any grain boundary included in said mono-domain region is electrically inactive.

16. (Previously Presented) An SRAM comprising:
a substrate;
an insulating film formed on the substrate, said insulating film having a protrusion extending in one direction;
a pair of cross-coupled driver transistors formed over the substrate;
a pair of access transistors;
a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
a word line electrically connected to the pair of access transistors,
wherein at least one of the access transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having
a mono-domain region in which a channel formation region is formed, and
wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region.

17. (Original) The SRAM according to claim 16 wherein said mono-domain region includes substantially no grain boundary.

18. (Original) The SRAM according to claim 16 wherein any grain boundary included in said mono-domain region is electrically inactive.

19. (Original) A mobile computer comprising the SRAM according to claim 1.

20. (Original) A head-mount display comprising the SRAM according to claim 1.

21. (Original) A motor vehicle navigation comprising the SRAM according to claim 1.
22. (Previously Presented) A mobile phone comprising the SRAM according to claim 1.
23. (Original) A video camera comprising the SRAM according to claim 1.
24. (Original) A projector comprising the SRAM according to claim 1.
25. (Original) A head-mount display comprising the SRAM according to claim 4.
26. (Original) A motor vehicle navigation comprising the SRAM according to claim 4.
27. (Previously Presented) A mobile phone comprising the SRAM according to claim 4.
28. (Original) A video camera comprising the SRAM according to claim 4.
29. (Original) A projector comprising the SRAM according to claim 4.
30. (Original) A mobile computer comprising the SRAM according to claim 4.
31. (Original) A head-mount display comprising the SRAM according to claim 7.
32. (Original) A motor vehicle navigation comprising the SRAM according to claim 7.
33. (Previously Presented) A mobile phone comprising the SRAM according to claim 7.
34. (Original) A video camera comprising the SRAM according to claim 7.

- 35. (Original) A projector comprising the SRAM according to claim 7.
- 36. (Original) A mobile computer comprising the SRAM according to claim 7.
- 37. (Original) A head-mount display comprising the SRAM according to claim 10.
- 38. (Original) A motor vehicle navigation comprising the SRAM according to claim 10.
- 39. (Previously Presented) A mobile phone comprising the SRAM according to claim 10.
- 40. (Original) A video camera comprising the SRAM according to claim 10.
- 41. (Original) A projector comprising the SRAM according to claim 10.
- 42. (Original) A mobile computer comprising the SRAM according to claim 10.
- 43. (Original) A head-mount display comprising the SRAM according to claim 13.
- 44. (Original) A motor vehicle navigation comprising the SRAM according to claim 13.
- 45. (Previously Presented) A mobile phone comprising the SRAM according to claim 13.
- 46. (Original) A video camera comprising the SRAM according to claim 13.
- 47. (Original) A projector comprising the SRAM according to claim 13.
- 48. (Original) A mobile computer comprising the SRAM according to claim 13.

49. (Original) A head-mount display comprising the SRAM according to claim 16.
50. (Original) A motor vehicle navigation comprising the SRAM according to claim 16.
51. (Previously Presented) A mobile phone comprising the SRAM according to claim 16.
52. (Original) A video camera comprising the SRAM according to claim 16.
53. (Original) A projector comprising the SRAM according to claim 16.
54. (Original) A mobile computer comprising the SRAM according to claim 16.
55. (New) The SRAM comprising:
- a substrate;
 - an insulating film formed on the substrate, said insulating film having a protrusion;
 - a pair of cross-coupled driver transistors formed over the substrate;
 - a pair of access transistors;
 - a pair of bit lines electrically connected to the cross-coupled driver transistors through the access transistors, respectively; and
 - a word line electrically connected to the pair of access transistors,
- wherein at least one of the cross-coupled driver transistors and the access transistors comprises a crystalline semiconductor film formed on the insulating film, said crystalline semiconductor film having a mono-domain region in which a channel formation region is formed,
- wherein said crystalline semiconductor film comprises a source region and a drain region, and a metallic silicide is formed on the surface of said source region and said drain region, and
- wherein a crystallization direction of said crystalline semiconductor film is substantially in parallel with a major surface of the substrate.

56. (New) The SRAM according to claim 55 wherein said mono-domain region includes substantially no grain boundary.

57. (New) The SRAM according to claim 55 wherein any grain boundary included in said mono-domain region is electrically inactive.

58. (New) A head-mount display comprising the SRAM according to claim 55.

59. (New) A motor vehicle navigation comprising the SRAM according to claim 55.

60. (New) A mobile phone comprising the SRAM according to claim 55.

61. (New) A video camera comprising the SRAM according to claim 55.

62. (New) A projector comprising the SRAM according to claim 55.

63. (New) A mobile computer comprising the SRAM according to claim 55.

REMARKS

Claims 1-63 are pending in this application, with claims 1, 4, 7, 10, 13, 16 and 55 being independent. Claim 4 has been amended to correct a minor error and new claims 55-63 have been added. No new matter is introduced.

Applicants hereby elect the invention of Species III (claims 7-9 and 31-36), and asserts that the claims of Species I (claims 1-3 and 19-24) are generic to Species III and IV. Since the claims of Species I are generic, applicants traverse the restriction with respect to Species I. Applicants also believe that the new claims are generic to Species III and IV.

The fees in the amount of \$650 for excess claim fees are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06 1050.

Respectfully submitted,

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